AMENDMENTS TO THE CLAIMS

Please amend the claims to read as follows:

1. (currently amended) A method for forming a gate oxide film of a semiconductor device comprising the steps of;

forming a gate oxide film and a polysilicon film sequentially on a semiconductor substrate;

performing a nitrogen ion implantation process ~~for the semiconductor substrate including~~ after the formation of the gate oxide film and the polysilicon film;

performing a thermal treatment process to form barrier layers by combination of oxides and nitrogen at an interface between the semiconductor substrate and the gate oxide film, and at an interface between the gate oxide film and the polysilicon film; and

forming a nitride film on the polysilicon film.

2. (currently amended) The method of forming a gate oxide film of a semiconductor device according to claim 1, wherein the thermal treatment process is performed by an RTP spark annealing process.

3. (currently amended) The method of forming a gate oxide film of a semiconductor device according to claim 1, wherein the nitrogen ion implantation process is performed by using a source gas including N^+ or N_2^+, with a dose of 1E14 atoms/cm^2 to 1E16 atoms/cm^2 and an implantation energy of 1keV to 20keV.

4. (currently amended) The method of forming a gate oxide film of a semiconductor device according to claim 2, wherein the RTP spark annealing process is performed at an N_2 gas ambient, a ramp up temperature is about 100°C/sec, and the RTP temperature is 900°C to 1100°C.